

We claim:

1. A method for treating a lung having reversible obstructive pulmonary disease, comprising:
 - applying energy to a treatment site in lung tissue ;
 - controlling a temperature of tissue near the treatment site.
2. The method of claim 1, where controlling the temperature comprises reducing the temperature.
3. The method of claim 1, where controlling the temperature comprises stabilizing the temperature.
4. The method of claim 1, where controlling the temperature reduces damage to the tissue.
5. The method of claim 4, where the tissue comprises an epithelium.
6. The method of claim 1, where reducing the temperature comprises injecting a fluid into the lung.
7. The method of claim 6, where the fluid comprises a bio-compatible fluid.
8. The method of claim 7, where the bio-compatible fluid comprises saline.
9. The method of claim 6, where injecting the fluid into the lung comprises injecting the fluid into an airway.
10. The method of claim 6, where injecting the fluid into the lung comprises injecting the fluid into a parenchyma of the lung.
11. The method of claim 6, where the fluid is oxygenated.

12. The method of claim 6, where locating the treatment site comprises locating the treatment site through a non-invasive imaging technique.
13. The method of claim 1, further comprising ventilating a portion of the lung.
14. The method of claim 1, where controlling the temperature of the tissue comprises controlling temperature of tissue proximal, distal, or circumferentially adjacent to the treatment site.
15. The method of claim 1, where applying energy comprises treating the airway wall in a pre-determined pattern.
16. The method of claim 1, wherein applying energy comprises applying radio frequency energy to the airway wall.
17. The method of claim 1, further comprising inserting a visualization system in the lungs.